Contributing to 'Our Common Future'

8 July 2015 - Met Office scientists will be presenting some of the latest research on climate change as they join experts from around the world at a key science conference in Paris.

Called 'Our Common Future Under Climate Change', the event builds on the results of the IPCC's 5th Assessment Report (AR5) by discussing the very latest research and address key issues concerning climate change.

The conference will help establish the science which will form the evidence base for the forthcoming COP 21 conference in Paris this December, where governments from around the world will try to agree a framework to combat climate change.

This month's conference is the largest gathering of climate scientists before the COP event.

The Met Office's Dr Matt Palmer is delivering a keynote talk on the subject of 'Earth's energy imbalance: current knowledge and future challenges'.

He said: "We know that increasing greenhouse gas concentrations in the atmosphere are changing the amount of energy coming into the Earth system. The symptoms of this energy accumulation are those that we can observe, such as increasing global temperatures, rising sea levels, shrinking glaciers and reducing Arctic sea ice.

"The energy imbalance is the most fundamental and reliable measure of the rate of global climate change. My talk will review the current state of knowledge on Earth's energy imbalance and make the case to sustain and extend current observing networks to advance our understanding of climate change."

Dr Peter Stott, head of climate monitoring and attribution at the Met Office, is presenting on the topic of how high impact extreme weather and climate events are changing and why.

"Determining how the chances of extremes are changing is vital to understanding the impact of human activity on the climate system," Dr Stott said. "I'll be talking about some of the recent research in this area, particularly relating to heatwaves."

Dr Chris Jones, head of Earth system and mitigation science at the Met Office, is co-convening a session on carbon sinks - such as oceans, forests and permafrost. These sinks currently absorb about half of all man-made carbon emissions, but more needs to be understood about how these sinks might change in future as the climate warms.

"The amount of carbon that ends up in the atmosphere will be key to determining how much future warming we see, so it's vital we understand how the ability of these sinks to absorb carbon may change in future," Dr Jones said.

Research from other Met Office scientists will also be presented alongside work from leading research institutions around the world. The conference takes place until 10 of July.

Last updated: 8 July 2015